Title 128 - Department of Environmental Quality

Chapter 20 - LAND DISPOSAL RESTRICTIONS (LDR)

001 Purpose, scope and applicability.

001.01 This Chapter identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

001.02 Except as specifically provided otherwise in this Chapter or Chapters 2 and 3, the requirements of this Chapter apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

001.03 Restricted wastes may continue to be land disposed as follows:

001.03A Where persons have been granted an extension to the effective date of a prohibition by EPA, with respect to those wastes covered by the extension;

001.03B Where persons have been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6 by EPA, with respect to those wastes and units covered by the petition;

001.03C Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this Chapter, or 40 CFR Part 148, are not prohibited if the wastes:

001.03C1 Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 144.6(a); and

001.03C2 Do not exhibit any prohibited characteristic of hazardous waste identified in Chapter 3, 005 through 010 at the point of injection.

001.03D Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this Chapter, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in Section 009, or are D003 reactive cyanide:

001.03D1 The wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under section 402 of the Clean Water Act (33 U.S.C. §1342); or

001.03D2 The wastes are treated for purposes of the pretreatment requirements of Section 307 of the Clean Water Act (33 U.S.C. §1317); or

001.03D3 The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in 40 CFR 268.37(a), as incorporated by reference in Section 008; and

001.03D4 The wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).

001.04 The requirements of this Chapter shall not affect the availability of a waiver under Section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. §9621).

001.05 The following hazardous wastes are not subject to any provision of this Chapter:

001.05A Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Chapter 8;

001.05B Waste pesticides that a farmer disposes of pursuant to Chapter 10, 007;

001.05C Wastes identified or listed as hazardous after November 8, 1984 for which EPA has not promulgated land disposal prohibitions or treatment standards;

001.05D De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding

one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

001.06 Universal waste handlers and universal waste transporters (as defined in Chapter 25) are exempt from Section 005 and 014 for the hazardous wastes listed below. These handlers are subject to regulation under Chapter 25.

001.06A Batteries as described in Chapter 25, 002;

001.06B Pesticides as described in Chapter 25, 003;

001.06C Thermostats as described in Chapter 25, 004; and

001.06D Lamps as described in Chapter 25, 005.

002 Definitions applicable in this Chapter. When used in this Chapter the following terms have the meanings given below:

002.01 "Halogenated organic compounds" or "HOCs" means those compounds having a carbon-halogen bond which are listed under 40 CFR Appendix III, as incorporated by reference in Section 015.

002.02 "Hazardous constituent or constituents" means those constituents listed in Appendix I of this Title.

002.03 "Land disposal" means placement in or on the land, except in a corrective action management unit or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

002.04 "Nonwastewaters" are wastes that do not meet the criteria for wastewaters in Section 002.06.

002.05 "Polychlorinated biphenyls" or "PCBs" are halogenated organic compounds defined in accordance with 40 CFR 761.3.

002.06 "Wastewaters" are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS).

002.07 "Debris" means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the

following materials are not debris: Any material for which a specific treatment standard is provided in Section 009 through 012, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by Section 011 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

002.08 "Hazardous debris" means debris that contains a hazardous waste listed in Chapter 3, 011 through 018, or that exhibits a characteristic of hazardous waste identified in Chapter 3, 005 through 010. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibition in Section 003.

002.09 "Underlying hazardous constituent" means any constituent listed in Section 012, Table 12, Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards.

002.10 "Inorganic metal-bearing waste" is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in Section 003.03A, and is specifically listed in 40 CFR Part 268 Appendix XI, as incorporated by reference in Section 021.

002.11 “Soil” means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in Section 003.

003 Dilution prohibited as a substitute for treatment.

003.01 Except as provided in Section 003.02, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with Section 009 through 014, to circumvent the

effective date of a prohibition in 40 CFR Subpart C, as incorporated by reference in Section 008, to otherwise avoid a prohibition in 40 CFR Subpart C, or to circumvent a land disposal prohibition imposed by this Chapter.

003.02 Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under Section 402 of the Clean Water Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under Section 307 of the CWA is not impermissible dilution for purposes of this section unless a method other than DEACT has been specified in Section 009 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

003.03 Combustion of the hazardous waste codes listed in 40 CFR Appendix XI, as incorporated by reference in Section 021, is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):

003.03A The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in Section 012;

003.03B The waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;

003.03C The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;

003.03D The waste is co-generated with wastes for which combustion is a required method of treatment;

003.03E The waste is subject to Federal and/or State requirements necessitating reduction of organics (including biological agents); or

003.03F The waste contains greater than 1% Total Organic Carbon (TOC).

003.04 It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal restriction treatment standard for lead. Lead-containing wastes include D008 wastes (wastes exhibiting a

characteristic due to the presence of lead), all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

004 The conditions and requirements of 40 CFR 268.4, pertaining to the treatment surface impoundment exemption, are hereby adopted and incorporated herein by reference.

005 Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.

005.01 Requirements for generators:

005.01A A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in Section 009, 011, or 013. This determination can be made in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in Chapter 1, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils that are contaminated by such hazardous wastes. These treatment standards are also found in Section 009, and are described in detail in Section 010, Table 10. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of Section 006 in addition to any applicable requirements in this section.

005.01B If the waste or contaminated soil does not meet the treatment standard: With the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column "005.01B" of the Table 8, Generator Paperwork Requirements, of this Title. No further notification is necessary until such time that the waste or facility change, in which case a

new notification must be sent and a copy placed in the generator's file.

005.01B1 For contaminated soil, the following certification statement should be included, signed by an authorized representative:

> I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by Title 128, Chapter 20, Section 013.03.

005.01C If the waste or contaminated soil meets the treatment standard at the original point of generation:

005.01C1 With the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste, and place a copy in the file. The notice must include the information indicated in column "005.01C" of Table 8, Generator Paperwork Requirements Table, of this Title, and the following certification statement, signed by an authorized representative:

> I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in Chapter 20, Sections 009 through 013. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

005.01C2 For contaminated soil, with the initial shipment of wastes to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice must include the information in column "005.01C" of Table 8, Generator Paperwork Requirements Table, of this Title.

005.01C3 If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded

from the definition of hazardous waste under Chapter 2, Section 007.02 are not subject to these requirements.

005.01D For reporting, tracking and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under 40 CFR 268.5, disposal in a no-migration unit under 40 CFR 268.6, or a national capacity variance or case-by-case capacity variance under 40 CFR Part 268 subpart C, which is incorporated by reference in Section 008.01 of this Chapter. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column "005.01D" of Table 8, Generator Paperwork Requirements Table, of this Title. If the waste changes, the generator must send a new notice to the receiving facility, and place a copy in their files.

Table 8 - Generator Paperwork Requirements Table

Required information	005.01B	005.01C	005.01D	005.01I
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment.	X	X	X	X
2. Statement: this waste is not prohibited from land disposal.			X	
3. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice.	X	X		

Required information	005.01B	005.01C	005.01D	005.01I
4. The notice must include the applicable wastewater/nonwastewater category (see Sections 002.04 and 002.06) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide).	X	X		
5. Waste analysis data (when available).	X	X	X	
6. Date the waste is subject to the prohibition.			X	
7. For hazardous debris, when treating with the alternative treatment technologies provided by Section 011: the contaminants subject to treatment, as described in Section 011.02; and an indication that these contaminants are being treated to comply with Section 011.	X		X	
8. For contaminated soil subject to LDRs as provided in Section 013.01, the constituents subject to treatment as described in Section 013.04, and the following statement: This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by Section 013.03 or the universal treatment standards.	X	X		
9. A certification is needed (see applicable section for exact wording.		X		X

005.01E If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under Chapter 9, Sections 007 and 008, or Chapter 10, Sections 004 and 005 to meet applicable LDR treatment

standards found at Section 009, the generator must develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Section 011, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

005.01E1 The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this Chapter, including the selected testing frequency.

005.01E2 Such plan must be kept in the facility's on-site files and made available to inspectors.

005.01E3 Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of Section 005.01C.

005.01F If a generator determines that the waste or contaminated soil is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines that the waste is restricted based on testing this waste or an extract developed using the test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in Chapter 1, and all waste analysis data must be retained on-site in the generator's files.

005.01G If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from this Title, under Chapter 2, 003 through 013, or Chapter 7, 001 through 006, subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at Chapter 2, 008.02 or that are CWA-equivalent, or are managed in a an underground injection well regulated by the Safe Drinking Water Act (SDWA)), he must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from Title 128 regulation, and the disposition of the waste, in the facility's on-site files.

005.01H Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under Chapter 2, 003 through 013, or Chapter 7, 001 through 006, or exempted from this Title, subsequent to the point of generation.

005.01I If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at Section 010.02:

005.01I1 With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column "005.01I" in Table 8, Generator Paperwork Requirements Table of this Title, and the following certification. The certification, which must be signed by an authorized representative and must be placed in the generator's files, must say the following:

> I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under appendix IV to 40 CFR part 268 as incorporated by reference in Section 016, and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at Section 010.02. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

005.01I2 No further notification is necessary until such time that the wastes in the lab pack change, or the receiving facility changes, in which case a new notice and certification must be sent and a copy placed in the generator's file.

005.01I3 If the lab pack contains characteristic hazardous wastes (D001-D043), underlying hazardous constituents (as defined in Section 002.09 need not be determined.

005.01I4 The generator must also comply with the requirements in Sections 005.01F and 005.01G.

005.01J Small quantity generators with tolling agreements pursuant to Chapter 9, 007.06 must comply with the applicable notification and certification requirements of Section 005.01 for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director.

005.02 The conditions and requirements of 40 CFR 268.7(b), pertaining to testing requirements for treatment facilities, are hereby adopted and incorporated herein by reference.

005.03 The conditions and requirements of 40 CFR 268.7(c), pertaining to land disposal facilities, are hereby adopted and incorporated herein by reference.

005.04 Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Chapter 2, 007.02 (i.e., debris treated by an extraction or destruction technology provided by Table 11, Alternative Treatment Standards for Hazardous Debris, of this Title, and debris that the Director has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

005.04A A one-time notification, including the following information, must be submitted to DEQ:

005.04A1 The name and address of the Subtitle D facility receiving the treated debris;

005.04A2 A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Numbers(s); and

005.04A3 For debris excluded under Chapter 2, 007.02A, the technology from Table 11, Alternative Treatment Standards for Hazardous Debris, used to treat the debris.

005.04B The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under Chapter 2,

007.02A, if a different type of debris is treated or if a different technology is used to treat the debris.

005.04C For debris excluded under Chapter 2, 007.02A of this chapter, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 11, Alternative Treatment Standards for Hazardous Debris, of this Title, as follows:

005.04C1 Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

005.04C2 Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

005.04C3 For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

005.05 Generators and treaters who first receive from EPA or an authorized state a determination that a given contaminated soil subject to LDRs as provided in Section 013.01 no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in Section 013.01 no longer exhibits a characteristic of hazardous waste must:

005.05A Prepare a one-time only documentation of these determinations including all supporting information; and,

005.05B Maintain that information in the facility files and other records for a minimum of three years.

006 Special rules regarding wastes that exhibit a characteristic.

006.01 The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under Sections 009 through 014. For purposes of this Chapter, the waste will carry the waste code for any applicable listed waste (Chapter 3, 011 through 017). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Chapter 3, 005

through 010), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in Section 006.02. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of Section 010, Table 10, the generator must determine the underlying hazardous constituents (as defined at Section 002.09) in the characteristic waste.

006.02 Where a prohibited waste is both listed under Chapter 3, 011 through 017, and exhibits a characteristic under Chapter 3, 005 through 010, the treatment standard for the waste code listed in Chapter 3, 011 through 017 will operate in lieu of the standard for the waste code under Chapter 3, 005 through 010, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

006.03 In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under Chapter 3, 005 through 010 may be land disposed unless the waste complies with the treatment standards under Sections 009 through 012.

006.04 Wastes that exhibit a characteristic are also subject to Section 005 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generators or treaters files and sent to the Department of Environmental Quality. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes. However, the generator or treater need only notify the Department of Environmental Quality on an annual basis if such changes occur. Such notification and certification should be sent to the Department of Environmental Quality by the end of the calendar year, but no later than December 31.

006.04A The notification must include the following information:

006.04A1 The name and address of the Subtitle D facility receiving the waste shipment; and

006.04A2 A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in Section 002.09), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will

be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

006.04B The certification must be signed by an authorized representative and must state the language found in 40 CFR 268.7(b)(4), as incorporated by reference in Section 005.02.

006.04B1 If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in 40 CFR 268.7(b)(4)(iv), as incorporated by reference in Section 005.02, applies.

007 Surface impoundment exemptions.

007.01 The conditions and requirements found in 40 CFR 268.14, pertaining to exemptions for newly identified or listed wastes managed in surface impoundments, are hereby adopted and incorporated herein by reference.

008 Prohibitions on land disposal.

008.01 The conditions and requirements of 40 CFR Part 268, Subpart C, pertaining to prohibitions on land disposal, are hereby adopted and incorporated herein by reference.

009 Applicability of Treatment Standards.

009.01 A prohibited waste identified in Table 9, Treatment Standards for Hazardous Wastes, of this Title may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:

009.01A All hazardous constituents in the waste or in the treatment residue must be at or below the values found in Table 9 for that waste ("total waste standards"); or

009.01B The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table ("waste extract standards"); or

009.01C The waste must be treated using the technology specified in Table 10, Technology Codes and Description of Technology-Based Standards.

009.02 For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab

samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in Chapter 1, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in 40 CFR 268.42(b), which are hereby adopted and incorporated herein by reference. (The provisions of Chapter 27, 001.04 do not apply to 40 CFR 268.42(b).)

009.03 When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern.

009.04 Notwithstanding the prohibitions specified in Section 009.01, treatment and disposal facilities may demonstrate (and certify pursuant to 40 CFR 268.7(b)(5), as incorporated by reference in Section 005.02) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in this section, provided the following conditions are satisfied:

009.04A The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of Chapter 21, 015, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

009.04B The treatment or disposal facility has used the methods referenced in Section 009.04A to treat the organic constituents; and

009.04C The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude.

009.05 For characteristic wastes (D001-D043) that are subject to treatment standards in Table 9, Treatment Standards for Hazardous Wastes, and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in Section 002.09) must meet Universal

Treatment Standards, found in Table 12 of this Title prior to land disposal as defined in Section 002.03.

009.06 The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in Chapter 1. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

009.07 Prohibited D004-D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage, do not have to be re-treated to meet treatment standards in this section prior to land disposal.

009.08 Zinc micronutrient fertilizers that are produced for the general public’s use and that are produced from or contain recycled characteristic hazardous waste (D004-D011) are subject to the following treatment standards in lieu of the standards in Table 9:

009.08A The following table identifies the restricted wastes and the concentrations of their associated constituents which may not be exceeded by the extract of a waste or waste treatment residual developed using SW-846 Method 1311 (TCLP) as incorporated by reference in Chapter 1, 003. Compliance with these concentrations is required based upon grab samples.

Waste Code	Regulated Hazardous Constituent	CAS number for Regulated Hazardous Constituent	Nonwastewaters concentration (mg/l)
D004	Arsenic	7440-38-2	5.0[1]
D005	Barium	7440-39-3	100
D006	Cadmium	7440-43-9	1.0
D007	Chromium (Total)	7440-47-32	5.0
D008	Lead	7439-92-1	5.0

Waste Code	Regulated Hazardous Constituent	CAS number for Regulated Hazardous Constituent	Nonwastewaters concentration (mg/l)
D009 (Low Mercury Subcategory - less than 260 mg/kg mercury)	Mercury	7439-97-6	0.20
D010	Selenium	7782-49-2	5.7
D011	Silver	7440-22-4	5.0

[1]This treatment standard has been based on EP Leachate Analysis but this does not preclude the use of TCLP analysis.

009.09 Effective September 4, 1998, the treatment standards for the wastes specified in Chapter 3 as Hazardous Waste Numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in Table 9, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at Section 010, Table 10, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidations as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at Section 010, Table 10, for wastewaters.